July 1, 2010

Mr. Steve Riva
Director, Permitting & Toxics Support Section
U. S. Environmental Protection Agency – Region II
290 Broadway – 25th. Floor
New York, N. Y. 10007-1866

Re: Non Applicability PSD Determination Request (NADR)
EEC Tyre Recycle Machine
Bioteknia Co.
653 Ponce de León Ave.
San Juan, Puerto Rico 00907

Dear Sirs:

Bioteknia, represented by its president Oberto Maimi- P. E., is planning to install a new facility in Puerto Rico to procese and convert used tires to petroleum distillates like diesel and oil, by low temperature continuous catalytic pyrolisis process.

This recycle plant will handle about 3,000 MT./yr. of this special waste. Bioteknia is analyzing three different sites in the island of Puerto Rico to develop the project, that will meet the Clean Air Act emission regulation standards, due to a hi-efficiency state of the art new control technology.

Biotekni'as president and some other related associates, visited this current year an identical facility operating in Shanghai, China, to study by first hand the operation of this process technology. Our immediate goal is to request to the U.S. E.P.A. a NADR, and then prepare and comply with all the federal and local state permitting bureaucracy, before buying the system.

In the next section we will describe the aspects for the new plant.

SECTION 1.0

SPECIFICATION FOR AUTOMATIC CONTINUOUS TYRE RECYCLE SYSTEM

1. SCOPE

A fully automatic Tyre Recycling machine for Bioteknia Corp. that incorporates:

a. **Tyres shredding system**: Consist of equipment cutting tyres into size <50mm.

b. **Fixed temperature heating system**: The equipment use oil/gas and self produce methane gas to provide hot air for the pyrolysis reactors during production.

c. **Continuous pyrolysis system**: consist of auto feeding equipment, rotating reactor chamber and auto discharge carbon black device. Cutted rubber <50mm are feed to reactor via feeding extruder, with low temperature pyrolysis reaction. Oil, gas and methane gas produce cooled by oil separator and condenser, fuel oil form will divert to oil storage tank meanwhile methane gas divert to gas clarification system before self recycle to contribute heat in heating system.

d. **Carbon black production system**: Consist of a drill delivery conveyor, equipped with a cooling system and magnetic separator, which will remove steel wire from crude carbon black powder and storage tank.

e. **Exhaust gas clarification system:** Consist of piping, dust collecting, gas clarification device, which will clean up discharged emission from heating system before disposing to atmosphere. Emission parameters will meet the emission standard of any industry country, including U. S. EPA.

f. **Methane gas clarification system:** Consist of device which clean up toxin gas produce during pyrolysis process before recycle into heat energy in heating system.

g. **Control system:** Consist of electric control panel which control the whole equipment operation.

h. **Distillation system:** Consist of the oil purification to obtain similar diesel quality oil.

2) PERFORMANCE REQUIREMENT

a. Recovery Rate from Tyre Recycle Machine (For 10MT of scrap tyre):

i) TDF (Type Derived Oil): ~45-50% (approx. 4.5-5MT) 2,205 lbs.
II) Carbon Black: 35-38% (approx. ~3.5-3.8 MT)
III) Steels: ~9-11% (approx. 0.9-1 MT)
* Base on Input of 10MT of Scrap Tyres

b. Recovery Rate from Distillation Machine:

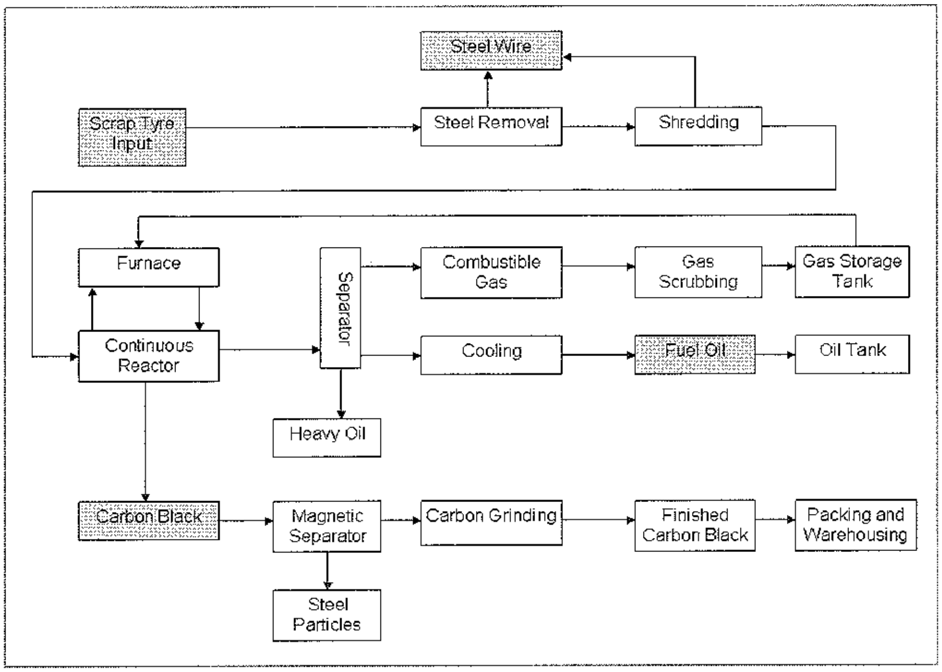
i) Diesel Grade Oil: ~70% (approx. 3.15-3.5MT)
II) Other Oil: ~30% (approx. 1.35-1.5MT)
*Base on Input of TDF (Tyre Derived Oil) from upstream process.

c. Working Hours: 24 Hours continuous

d. Operating days in a year: 300 days

e. Production Capability per day: 10 MT

3) PROCESS WORKFLOW



The scrap tire, will be shredded into suitable tire chips for pyrolysis reaction (50x50mm), and then the tire chips will be constantly conveyed to pyrolysis reactor with low temperature sulfur removal catalyst via the feeder extruder to carry through a normal pressure low temperature pyrolysis reaction. After being fractionated and cooled by the oil separator, will create fuel oil and Little combustible gas. The combustible gas will be recycled to pyrolysis heating system once it has been passed through the exhaust scrubbing system. Meanwhile, the hot wind provides heating for the pyrolysis reactor which via hot wind recycling system returns to the pyrolysis reactor for the recycling use thus can greatly economize energy consumption and reduce the equipment's running cost. After magnetic separation, the solid pyrolysis outcome-raw carbon black will be automatically sent to the carbon black production system and after processions such as grinding, chelating, reduction and packaging, the refined procession for carbon black will be completed. Gases that produced in the heat supply system will be discharged at the required standard after the gas clarification system. After cooling, oil and exhaust will become light oil component, diesel component and incondensable gas. The non condensable gas after going through the scrubbing tower will be transferred to the furnace for burning and the exhaust produced in the gas clarification system will be discharged at the required standard.

A summary of the specs and a lay-out is shown in Appendix I.

2.0 Regulatory Overview

The goal of the Clean Air Act is to protect the public health and welfare from the harmful effects of air pollutants. To this end, national ambient air quality standards were developed as a quality reference point. Also, state implementation plans were required to manage and regulate the provisions of the act, including permitting.

Congress mandated that the EPA promulgate national ambient air quality standards as maximum levels of selected pollutants which would lead to unacceptable air quality. These numerical standards were to be base don background studies which included control technology, costs, energy requirements, emission reduction benefits, and environmental impacts.

The national primary ambient air quality standards are judged necessary, with an adequate margin of safety, to protect public health. Secondary standards were developed to protect the public welfare from any known or anticipated adverse effects of a pollutant, such as impaired vision or damage to buildings and life forms.

The pollutant levels of the national primary and secondary ambient air quality standards are presented in Table 1. The reference condition for these standards is a temperature of 25°C and a pressure of 760 mm Hg.

The promulgation of the standards stated that they should not in any way be considered to allow significant deterioration of an area's existing air quality. Furthermore, the states may establish statewide or regional ambient air quality standards which are more stringent tan the national standards.

AIR QUALTY STANDARDS (40CFR PART 50)

TABLE 1

National Primary and Secondary Ambient Air Quality Standards (1)

Pollutant	Air Quality Standard		
Sulfur dioxide			
Primary	80 mg/m^3	0.03 ppm	Annual arithmetic mean
	365 mg/m^3	0.14 ppm	maximum 24-h concentration not to be exceeded more
than			once per year
Secondary	1300 mg/m^3	0.5 ppm	Maximum 3-h concentration not to be exceeded more tan once per year
Particulate matter			
Primary and secondary	150 mg/m^3	-	24-h average concentration
	50 mg/m^3	-	Annual arithmetic mean
Carbon monoxide			
Primary and secondary concentration	10,000 mg/m^3	9 ppm	8-h average not to be exceeded more
than			once per year
	40,000 mg/m^3	35 ppm	1-h average concentration not to be exceeded more than once per year
Ozone			
Primary and secondary	235 mg/m^3	0.12 ppm	1-h average concentration not to be exceeded more than once per year
Nitrogen dioxide			
Primary and secondary	100 mg/m^3	0.53 ppm	Annual arithmetic mean
Lead			
Primary and secondary	1.5 mg/m^3	-	Maximum arithmetic mean average over a calendar quarter

The Bioteknia will be subject to both Federal and Commonwealth of Puerto Rico air quality regulations. These regulations impose permitting requirements and specific standards for expected air emissions. The standards and regulations that pertain to the proposed facility are:

- New Source Performance Standards (NSPS) which impose emission standards on new facilities (Clean Air Act Section 111; 40 CFR Part 60).
- National Ambient Air Quality Standards (NAAQS) established by the U. S. Environmental Protection Agency (EPA) for specific criteria pollutants (40 CFR 50).
- New Source Review to determine whether the facility metes the requirements of the Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21). The PSD regulations are applicable to new or modified major sources located in areas attaining the National Ambient Air Quality Standards (NAAQS).
- Puerto Rico Air Pollution Control Regulations parts I through V.

Detailed discussions of these regulations as they pertain to the proposed facility are provided below.

2.1 New Source Performance Standards (NSPS)

The NSPS are a set of national emission standards for both criteria and designated pollutants from new, modified, or reconstructed sources (40 CFR, part 60). New electric utility steam generating units which have a heat input greater than 250 million Btu/hour must comply with Subpart Da of the NSPS, "Standards of

Performance for Coal Preparation Plants." Facilities with non-metallic mineral processing (in this case limestone crushing) are subject to Subpart 000, but any of this categories applies to our plant.

2.2 National Ambient Air Quality Standards (NAAQS)

The Clean Air Act of 1970 mandated that EPA establish health and public welfare oriented standards for specific pollutants (known as criteria pollutants) to protect sensitive population groups. Subsequently, EPA promulgated NAAQS for sulfur dioxide (SQ^2), particulate matter less tan 10 microns in size (PM10), nitrogen dioxide (NO^2), carbon monoxide (CO), ozone (O^3) and lead (Pb). The NAAQS, which have been adopted by the Puerto Rico Environmental Quality Board, are listed in Table 1.

The NAAQS specify various averaging periods which coincide with established public health and general welfare impact criteria. The primary standards are intended to protect the health of sensitive population groups such as the Young and elderly and those with respiratory ailments. The secondary standards are intended to protect the general welfare of the public in terms of indirect impacts such as effects on vegetation, soils, and structures.

Regions within a state are designated as either attainment or nonattainment areas. When the air quality exceeds national ambient air quality standards, the region is an "attainment area." The designations are pollutant-specific, which means an area may fall into both categories for different pollutants.

In our case, no-matter if the area is classified or not as attainment for all six criteria pollutants; we understand that we are excempt to comply with the application of PSD regulation.

Permits are issued to new or modified existing major sources in attainment areas. These permits are part of the "prevention of significant deterioration" program and apply to facilities expected to emit over 100 tons per year.

Therefore, our emission source can be subjected to temporary surveys, so EPA can require characterization and quantification.

The characterization of an emission stream begins with a survey of facility operations and a determination of emission locations. The stack emissions must be quantified through a sampling and measurement program, and, in some cases, ambient air monitoring is required or desirable. The following discussion focuses on procedures for an industrial installation (4), but largely applies to other facilities, such as a solid waste incinerator.

The first step in characterizing air pollution from an industrial facility is the emission survey, which locates sources and defines quantities for all air contaminants.

Source Identification. The identification of emission sources begins with an in-depth review of process flow sheets and associated data. This data base is then tested and verified by a tour of plant operations.

Process Flow Sheets. Design, or preferably, "record" drawings of the facility's processes will .identify the location of emission sources. Typically, process flow sheets will provide sufficient information on input materials and process functions to make a qualitative assessment of the emissions.

Design development reports, permit applications, historical process and emission records for the facility or a similar facility, and other such data will aid in the preliminary identification of emission sources.

This step of the emission survey concludes with the development of plant-specific survey data sheets pertaining to the process(es) and emission control(s) data and with the establishment of an appropriate filing recoding system for data management.

Plant Inspection. With the foregoing material in hand, an inspection tour is made of the plant to verify available records, to record undocumented changes, and to provide input, to the design of control equipment. Candid interviews with plant operating personnel are a very important function during the tour.

Completing the plant inspections with accurate stack information is another important task. These data are needed for development of a testing program.

Emission Quantifications. Data from the records search and plant tour are next organized to formulate specific emission survey functions as part of the pant's compliance schedule.

Compliance Program. Source testing is required to define needs to achieve compliance to demonstrate effectiveness of new control techniques, or to provide records of continuing compliance base don quantitative field results from individual sources. Steps in achieving compliance are charted in Fig. 4.2 (5).

Quantification Procedures. The emission survey is developed by applying a combination of procedures related to quantity measurements from existing files, ongoing recordkeeping and monitoring, and new data collection. These procedures include review of permit application and design data, analysis of fuel and raw material usage, calculation of mass balance, application of expected emission factors from the literature (6), and new testing of emission sources.

In Appendix 2 we are including an original Laboratory Certificate of Air Quality for the three points emissions installed and operating in Shangai, China. The unique difference of both is that ours will be less than a this the nominal capacity of the existing in China (3,000 mt./yr. vs. 10,000 mt./yr.)

In Table 2 we have a summary of the air emissions quantitative analysis in tons./yr.

If requested, we can submit a manufacturer's certification upon availability.

Respectfully, we are requesting your professional opinion of our request and your recommendation as your convenience.

Cordially yours,

José A. Longo –CEA; REM; MSPH
Environmental Affairs Consultant

Cc/Mr. Umesh Dholakia